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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,243	12/16/2004	Tetsuya Nagai	0121/0048	8353
21395	7590	10/25/2006	EXAMINER	
LOUIS WOO LAW OFFICE OF LOUIS WOO 717 NORTH FAYETTE STREET ALEXANDRIA, VA 22314			ROGERS, KELLY A	
			ART UNIT	PAPER NUMBER
			2828	

DATE MAILED: 10/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/518,243

Applicant(s)

NAGAI ET AL.

Examiner

Kelly A. Rogers

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Objections

Claims 4, are objected to because of the following informalities: claim 4, dependent upon claim 1, lacks antecedent basis for average optical power, P1, average optical power, P2, burst #1, burst #2, and ΔI_m . The antecedent basis for ΔI_m is established in claim 2, thus claim 4 has been examined as if it depended on claim 2. Claim 6, dependent upon claim 1, lacks antecedent basis for average optical power, P3, and burst #3. Claim 9, dependent upon claim 8, lacks antecedent basis for average optical power, P1, average optical power, P2, burst #1, burst #2, ΔI_m , average optical power, P3, and burst #3. Claim 11, dependent upon claim 10, lacks antecedent basis for average optical power, P1, average optical power, P2, burst #1, burst #2, ΔI_m , average optical power, P3, and burst #3. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-13 are rejected under 35 U.S.C. 102(b) as being taught by Tsuchida (JP 10-163555-A), herein referred to as '555.

As to claims 1, 8, 10, 12, and 13, '555 teaches a burst signal extinction ratio control circuit and method for supplying a control signal to a driving section for performing driving by supplying a laser diode with a bias current and a modulation

current, comprising: a measurement means for measuring average optical power for each burst of the laser diode [fig 1, number 3]; a modulation current control means for controlling a modulation current I_m of the laser diode based on the average optical power measured by the measurement means [fig 1, number 6]; and a bias current control means for controlling a bias current I_b of the laser diode based on the average optical power measured by the measurement means [fig 1, number 7].

As to claims 2 and 3, '555 teaches wherein the modulation current control means has a function having a means for increasing the modulation current I_m by a specified value ΔI_m [paragraph 22], wherein the specified value ΔI_m is proportional to the modulation current I_m [paragraph 22].

As to claims 4 –7, 9, and 11, '555 teaches, wherein the modulation current control means comprises: a means for detecting a difference between average optical power P_1 of burst #1 when the modulation current is I_m and average optical power P_2 of burst #2 when the modulation current is $I_m + \Delta I_m$ [fig 1, number 4]; and a means for decreasing the modulation current when a value of the difference is larger than a previously specified reference value ΔP_{ref} , and on the contrary, for increasing the modulation current when the value of the difference is smaller than the reference value ΔP_{ref} , wherein an increasing or decreasing amount of the modulation current is set to a previously specified constant value A [paragraph 30], wherein the bias current control means comprises: a means for comparing average optical power P_3 of burst #3 when the bias current is I_b with a previously specified reference value P_{ref} ; and a means for decreasing the bias current when the average optical power P_3 is larger than the

reference value P_{ref} , and for increasing the bias current when the average optical power P_3 is smaller than the reference value P_{ref} based on the comparison [fig 1, number 7], wherein an increasing or decreasing amount of the bias current is set to a previously specified constant value B [paragraph 31], and further comprising: a step for alternately executing the modulation current control step and the bias current control step [paragraph 33].

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelly A. Rogers whose telephone number is 571-272-8047. The examiner can normally be reached on Monday through Friday 9am - 5pm.

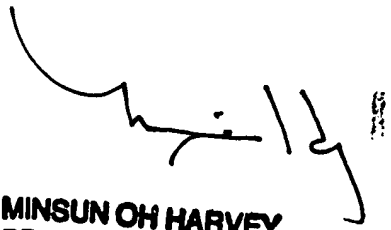
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun Harvey can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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